REMARKS

Claim 1-36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pudleiner et al., U.S. Patent No. 6,022,939. The claims have been amended to overcome the rejection and reconsideration is requested as to the amended claims.

The independent claims (1, 13 and 25) have been amended to remove aromatic diols from the chain extender component of Applicant's claims. Also, dependent claims (10, 22 and 34) have been amended to remove aromatic diols from the chain extender component. Claims 14-24 have been amended to change their dependency. Claims 26-36 have been amended to be process claims and to change their dependency. The amendments to claims 14-24 and 26-36 were made to correct an obvious drafting error.

The reference Pudleiner et al. has as its objective the creation of a high heat resistance thermoplastic polyurethane which can also be processed by extrusion. Pudleiner accomplishes the objective by using an aromatic chain extender to give high heat resistance, but the aromatic chain extender results in poor melt processing. Pudleiner et al. improves the melt processing by adding a second chain extender, while retaining the high heat performance of the aromatic chain extender.

Applicant's amended claims to do contain an aromatic chain extender but rather is limited to an unbranched, unsubstituted, straight chain diol. Applicant's objective is to obtain a thermoplastic polyurethane that has a high content of hard segment (at least 20%) and be able to process this high hard segment polymer by extrusion. Applicant accomplishes this objective by adding a crystallization retarding component to the reaction to make the polymer. The crystallization retarding component gives quite surprising results by retarding the crystallization of the polymer until after it exits the extrusion die, thus allowing these high hard segment polymers to be processed.

It is submitted that the reference Pudleiner et al. does not teach nor suggest to one skilled in the art that a high hard segment thermoplastic polyurethane made with a straight chain diol chain extender can be made to have such dramatically better extrusion processing by the use of a crystallization retarding component. Pudleiner et al. uses only aromatic chain extenders such as benzene di-substituted with hydroxyalkyl, hydroxyalkoxy, aminoalkyl and aminoalkoxy moieties. Applicant's amended claims do not use aromatic chain extenders.

The amended claims are believed to be unobvious over the disclosure and teaching of Pudleiner et al. One skilled in the art desiring to improve the extrudability of a thermoplastic polyurethane made with a straight chain diol chain extender would not consult the teachings of Pudleiner et al. composition made with an aromatic diol chain extender.

The rejection has been respectfully traversed and the Examiner is requested to reconsider the rejection and allow the amended claims.

Respectfully submitted,

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Date: 29 JAN. 2004
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